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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/524,572	02/15/2005	Daniel Willem Elisabeth Schobben	NL 030607	8319

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EXAMINER	
JOSEPH, DENNIS P	

ART UNIT	PAPER NUMBER
2629	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/524,572	SCHOBBEN ET AL.	
	Examiner	Art Unit	
	Dennis P. Joseph	2629	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on *15 February 2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-14* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,2 and 4-14* is/are rejected.

7)☒ Claim(s) *3* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *15 February 2005* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☒ Certified copies of the priority documents have been received in Application No. 10/524,572.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *7/3/2007*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. This Office Action is responsive to application No. 10/524,572 on February 15, 2005. Claims 1-14 are pending and have been examined.

Priority

2. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Allowable Subject Matter

3. Claim 3 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claim Rejections – 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. **Claims 4 and 7** are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 4 recites therein, "a first one of the light elements having a first size (W_{LE}) and a second size being smaller than the first size, a first one of the slits (218) having a third size and a fourth size being smaller than the third size, the first one of the light elements (110) being oriented with the first size (W_{LE}) substantially perpendicular relative to the third size of the first one of the slits (218)." The limitation is indefinite because only the first light element is mentioned and not the other three used for the size comparison. As for the slits, only the first one, 218 is mentioned, not 220. Also, the sizes of these cannot be perpendicular, only the elements can be perpendicular to each other and the claim language is ambiguous to that. Appropriate correction is required.

For purposes of examination, the limitation will be interpreted as the slits are perpendicular to the direction the images are being displayed in. W_{LE} is the width of the pixel and the second size, W_B is the distance between light emitting elements.

Similar issues with Claim 7. Appropriate correction is required.

Claim Rejections – 35 USC § 103

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 103(a) that forms the basis for the rejections under this section made in this Office action:
(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham* v. *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

7. **Claims 1,2,4-8 and 13** rejected under 35 U.S.C. 103(a) as being unpatentable over **Morishima (US 6,462,871 B1)** in view of **Tsuchiya et al. (US RE37,610 E)**

Morishima teaches in Claim 1:

A display system for displaying images (Column 1, Line 6) , comprising: a display screen (Figure 1, 10 is the backlight comprising light elements for each parallax image to be displayed, Figure 20) for generating a first one of the images and a second one of the images (Column 2, Line 36) ; and an optical selection screen (Figure 2, lenticular lens 3 and 4) for selectively passing the first one of the images in a first direction towards a first observer and passing the second one of the images in a second direction towards a second observer (Column 11, Lines 40-50); but

Morishima does not explicitly teach that the system is for "displaying images within a vehicle" and that the observers are "located inside the vehicle."

However, in the same field of endeavor, stereoscopic displays, Tsuchiya teaches of a "stereoscopic picture processing element" for a vehicle (Tsuchiya, Column 1, Lines 16 and 55)

Therefore, it would have been obvious to a person with ordinary skill in the art at the time of the invention to integrate the stereoscopic display as taught by Morishima with Tsuchiya's stereoscopic display in a vehicle with the motivation that it would decrease the burden on a driver by informing him of key events while driving. (Tsuchiya, Column 1, Line 50)

Morishima teaches in Claim 2:

A display system as claimed in claim 1, wherein the optical selection screen comprises a number of bars (Morishima, Figure 2, substrate 7) and slits (Figure 2, aperture portions 8-1), the slits being arranged for passing the first one of the images in the first direction and for passing the second one of the images in the second direction and the bars being arranged to obstruct the first one of the images in the second direction and to obstruct the second one of the images in the first direction. (Morishima, Column 6, Lines 3-10, the mask substrate has aperture portions which are arranged to let light through in different patterns.)

Morishima teaches in Claim 4:

A display system as claimed in claim 2, wherein the display screen comprises a number of light elements (Morishima, Figure 1, backlight 10 containing light elements for each parallax image to be displayed, Figure 20.), a first one of the light elements having a first size (W_{LE}) and a second size being smaller than the first size, a first one of the slits having a third size and a fourth size being smaller than the third size, the first one of the light elements being oriented with the first size (W_{LE}) substantially perpendicular relative to the third size of the first one of the slits. (W_{LE} is the width of each light emitting element and the second size, W_B is the distance

between each light emitting element. Morishima, Figure 20, W_{LE} is the distance of each light emitting element 102 and W_B is the distance between each element. Column 1, Line 60, the pixel is perpendicular to the image direction.)

Morishima teaches in Claim 5:

A display system as claimed in claim 1, wherein the optical selection screen comprises a number of lenses for selectively passing the first one of the images in the first direction towards the first observer and passing the second one of the images in the second direction towards the second observer. (Morishima, Figure 2, lenticular lenses 3 and 4 control the image which is transmitted.)

Morishima teaches in Claim 6:

A display system as claimed in claim 5, wherein the display screen comprises a number of light elements each having a first size (W_{LE}) and being disposed at a first distance (W_B) from each other and wherein a second distance between a first one of the lenses to a first one of the light elements which belongs to the first one of the lenses is substantially different from a focal length of the first one of the lenses. (Morishima, Figure 20 shows the pixel element 101a which are at a distance away from the lens 104 and this distance is substantially different the from the focal length of the lens.)

Morishima teaches in Claim 7:

A display system as claimed in claim 5, wherein the display screen comprises a number of light elements, a first one of the light elements having a first size (W_{LE}) and a second size being smaller than the first size, a first one of the lenses having a third size and a fourth size being smaller than the third size, the first one of the light elements being oriented with the first size (W_{LE}) substantially perpendicular relative to the third size of the first one of the lenses. (W_{LE} is the width of each light emitting element and the second size, W_B is the distance between each light emitting element. Morishima, Figure 20, W_{LE} is the distance of each light emitting element 102 and W_B is the distance between each element. Column 1, Line 60, the pixel is perpendicular to the image direction.)

Morishima teaches in Claim 8:

A display system as claimed in claim 1, comprising receiving means for receiving positional information of the first observer and wherein the display screen is a passive display screen comprising a directed back-light (Figure 1, backlight 10) being controlled on basis of the positional information of the first observer. (Column 2, Line 25 provides for sending the parallax image based on the position of the observer.)

Morishima and Tsuchiya teach in Claim 13:

A vehicle comprising the display system (100,500,600) for displaying images, as claimed in claim 1. (Tsuchiya, Column 1, Lines 16 and 55)

8. **Claims 9-12 and 14** rejected under 35 U.S.C. 103(a) as being unpatentable over **Morishima (US 6,462,871 B1)** and **Tsuchiya et al. (US RE37,610 E)** as applied to claim 1 above, and further in view of **Kuno et al. (5,467,102)**

Morishima and Tsuchiya teach in Claim 9:

A display system as claimed in claim 1, wherein the display screen is arranged to generate a third one of the images and wherein the display screen comprises the optical selection unit (Morishima, Figure 2, lenticular lens 3 and 4), but

Morishima and Tsuchiya do not explicitly teach that the optical selection unit can change from "a multi-view state of selectively passing the first one of the images in the first direction and passing the second one of the images in the second direction; to a single-view state of passing the third one of the images in the first direction and in the second direction."

However, in the same field of endeavor, display units, Kuno teaches of a single display (Column 5, Line 66) which can a multi-view state which can display two images in the first and second directions (Figure 8B) and of a single-view state which can display one image in the first and second directions. (Figure 8A) (Column 7, Lines 32-54)

Therefore, it would have been obvious to a person with ordinary skill in the art at the time of the invention to integrate the two mode display as taught by Kuno with Morishima's stereoscopic display with the motivation that being able to have a linked mode as well as two separate ones

can be convenient for the user while reading various articles on the display. (Column 6, Lines 10-29)

Morishima teaches in Claim 10:

A display system as claimed in claim 9, wherein the optical selection screen (Figure 2, lenticular lens 3 and 4) comprises a number of bars (Figure 2, substrate 7) which are designed to be switched between a transparent state and a non-transparent state. (Column 15, Lines 35-40, light-transmitting and light-shielding portions)

Morishima teaches in Claim 11:

A display system as claimed in claim 10, wherein the bars (Figure 2, substrate 7) are switched between the transparent state and the non-transparent state on basis of an electric or magnetic field. (Column 1, Lines 29-33)

Morishima teaches in Claim 12:

A display system as claimed in claim 9, wherein the optical selection screen comprises a number of lenses being placed within a reservoir in which a liquid having a first refractive index which is substantially equal to a second refractive index of a material of the lenses (Column 6, Lines 14-17), can be put and drawn off to switch the optical selection unit (104) between the single-view state and the multi-view state, respectively. (The combination teaches that the optical selection unit can be implemented to switch between the single and multi-view states.)

Morishima teaches in Claim 14:

A vehicle comprising the display system for displaying images, as claimed in claim 9, comprising a sensor for detecting whether the second observer is present or not and for controlling the switching unit. (Column 2, Line 25, providing means for detecting an observer.)

Conclusions

9. The prior arts made of record and not relied upon are considered pertinent to applicant's disclosure. Takezaki (US 5880704), Woodgate et al. (US 6055013), Ishikawa (US 2001/0022563 A1) and Crabtree (US 5825337) are cited to show of a stereoscopic system using a lenticular system to display 3D images to multiple observers.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dennis P. Joseph whose telephone number is 571-270-1459. The examiner can normally be reached on Monday-Friday, 8am-5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Amr Awad can be reached on 571-272-7764. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

DJ

AMR A. AWAD
SUPERVISORY PATENT EXAMINER